



## State of Utah

Department of  
Natural ResourcesROBERT L. MORGAN  
*Executive Director*Division of  
Oil, Gas & MiningLOWELL P. BRAXTON  
*Division Director*OLENE S. WALKER  
*Governor*GAYLE F. McKEACHNIE  
*Lieutenant Governor*

November 3, 2004

Wendell Owen, Mine Manager  
Co-Op Mining Company  
P.O. Box 1245  
Huntington, Utah 84528Re: Conditional Approval of Culvert Removal, Co-Op Mining Company, Bear  
Canyon Mines, C/015/0025, Task ID #2052, Outgoing File

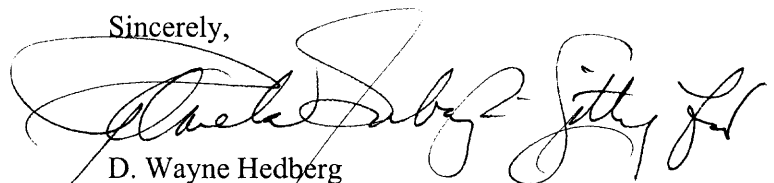
Dear Mr. Owen:

The above-referenced amendment is conditionally approved upon receipt of three additional clean copies prepared for incorporation. Please submit these additional copies by November 16, 2004. Once we receive these copies, final approval will be granted.

A stamped incorporated copy of the approved plans will also be returned to you at that time, for insertion into your copy of the MRP. A copy of our Technical Analysis is enclosed.

If you have any questions, please call me at (801) 538-5286 or Jim Smith at (801) 538-5262.

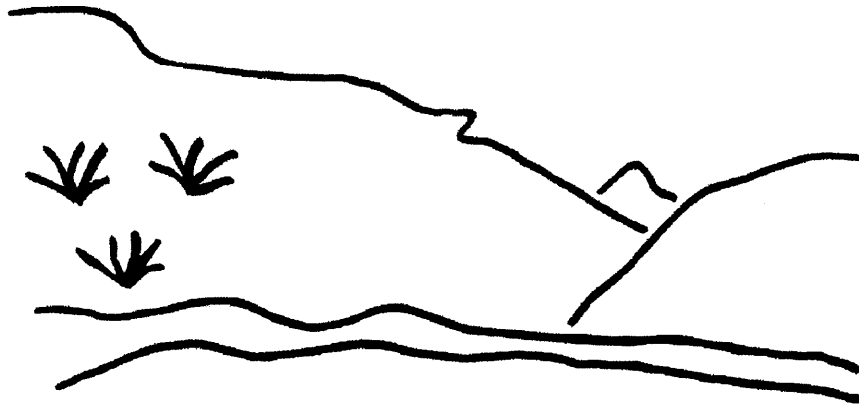
Sincerely,

  
D. Wayne Hedberg  
Permit Supervisor

Enclosure

cc: Price Field Office  
O:\015025.BCN\FINAL\CONDAPP2052.DOC

# State of Utah



## Utah Oil Gas and Mining

### Coal Regulatory Program

Bear Canyon Mine  
Culvert Removal  
C/015/025  
Task ID #2052  
Technical Analysis  
November 1, 2004

## TABLE OF CONTENTS

---

<b>INTRODUCTION.....</b>	<b>3</b>
<b>GENERAL CONTENTS.....</b>	<b>5</b>
IDENTIFICATION OF INTERESTS .....	5
<b>OPERATION PLAN .....</b>	<b>7</b>
HYDROLOGIC INFORMATION .....	7
Diversions: General .....	7
MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS.....	8
Mining Facilities Maps .....	8
Certification Requirements .....	8

## TABLE OF CONTENTS

---

## TECHNICAL ANALYSIS

---

## TECHNICAL ANALYSIS

The Division regulates the Surface Mining Control and Reclamation Act of 1977 (SMCRA). When mines submit a Permit Application Package or an amendment to their Mining and Reclamation Plan, the Division reviews the proposal for conformance to the R645-Coal Mining Rules. This Technical Analysis is such a review. Regardless of these analyses, the permittee must comply with the minimum regulatory requirements as established by SMCRA.

Readers of this document must be aware that the regulatory requirements are included by reference. A complete and current copy of these regulations and a copy of the Technical Analysis and Findings Review Guide can be found at <http://ogm.utah.gov/coal>

This Technical Analysis (TA) is written as part of the permit review process. It documents the Findings that the Division has made to date regarding the application for a permit and is the basis for permitting decisions with regard to the application. The TA is broken down into logical section headings which comprise the necessary components of an application. Each section is analyzed and specific findings are then provided which indicate whether or not the application is in compliance with the requirements.

Often the first technical review of an application finds that the application contains some deficiencies. The deficiencies are discussed in the body of the TA and are identified by a regulatory reference which describes the minimum requirements. In this Technical Analysis we have summarized the deficiencies at the beginning of the document to aid in responding to them. Once all of the deficiencies have been adequately addressed, the TA will be considered final for the permitting action.

It may be that not every topic or regulatory requirement is discussed in this version of the TA. Generally only those sections are analyzed that pertain to a particular permitting action. TA's may have been completed previously and the revised information has not altered the original findings. Those sections that are not discussed in this document are generally considered to be in compliance.



## **INTRODUCTION**

---

## **INTRODUCTION**

Co-Op Mining submitted this proposed amendment on August 4, 2004. It involves changes to the Company Officers and Directors, abandoning a culvert in place without removal, and enlarging of a ditch to accommodate the additional flow from the abandoned culvert.

This amendment should be approved.

Page 4  
C/015/025  
Task ID #2052  
November 1, 2004

## INTRODUCTION

---



---

## GENERAL CONTENTS

# GENERAL CONTENTS

## IDENTIFICATION OF INTERESTS

Regulatory Reference: 30 CFR 773.22; 30 CFR 778.13; R645-301-112

### Analysis:

Effective July 1, 2004, C. W. Reynolds became Vice President of C. W. Mining and Mine Manager, replacing, respectively, J. A. Gustafson and Wendell Owen.

Charles Reynolds has replaced Wendell Owen as the Resident Agent.

### Findings:

Identification of Interests information in the Culvert Removal amendment meets the requirements of the Coal Mining Rules.

Page 6  
C/015/025  
Task ID #2052  
November 1, 2004

## **GENERAL CONTENTS**

---

## OPERATION PLAN

---

# OPERATION PLAN

## HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

### Analysis:

#### Diversions: General

Culvert C-37U has been abandoned in place, as shown in revised Table 7.2-11 and the table on page 7G-48. The culvert carried runoff from watershed AU-21 under the road to the Tank Seam Portal. Runoff from AU-21 is now combined with runoff from watershed AU-26 and the road, and flows alongside the road in combined ditches D-37U and D38U, which effectively are now a single ditch although they have distinct design and construction.

To accommodate the additional flow because of the abandonment of culvert C-37U, ditch D-37U has been redesigned, and the parameters for ditch D-37U have been recalculated using FlowMaster software. A copy of the FlowMaster printout is included to replace page 7G-187. Calculations are summarized in Table 7.2-10. Peak flow (Q) input is now 1.25 cfs (more than a 10-fold increase from the 0.10 cfs used previously). Other input parameters remain unchanged. Among the new values calculated, depth has increased from 0.2 to 0.52 foot, and critical depth from 0.23 to 0.63 foot.

As-built dimension of ditch D-37U have been increased from 1 foot wide by 0.5 foot deep to 1.4 feet wide and 0.7 foot deep, as shown in the revised table on page 7G-100. This leaves 0.18 foot of freeboard above calculated depth and only 0.07 foot of freeboard above critical depth: this is less than ideal and the smallest freeboard for any ditch at this mine, but the surface of the road itself is sloped in towards the ditch, so this minimal freeboard should be sufficient to prevent uncontrolled drainage over the roadway (from a 10-year, 6-hour storm event).

### Findings:

Hydrologic Information in the Culvert Removal Amendment meets the requirements of the R645 Rules.

## **MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS**

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

### **Analysis:**

#### **Mining Facilities Maps**

Locations of the powder magazine and the cap magazine have been added to Plate 2-4F.

Culvert C-37U has been abandoned in-place and flow is now continuous from ditch D-37U into ditch D-38U. To minimize confusion, especially during inspections, Plate 7-1G has been updated to show that culvert C-37U has been abandoned in-place and that flow in ditches D-37U and D-38U is now effectively continuous (although each ditch still has distinct design, construction, and capacity).

#### **Certification Requirements**

Plates 7-1G and 2-4F are certified.

### **Findings:**

Maps, Plans, And Cross Sections Of Mining Operations in the Culvert Removal amendment meet the requirements of the R645 Rules.